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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,693	06/26/2001	Steve Biellak	M-10693 US	1752

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EXAMINER
PHAM, HOA Q

ART UNIT	PAPER NUMBER
2877	

DATE MAILED: 01/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/891,693	BIELLAK ET AL.	
	Examiner	Art Unit	
	Hoa Q. Pham	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: "second angle is around zero degrees" in claims 15 and 38 is not supported by the present specification.

Claim Rejections - 35 USC § 112

2. Claims 14, 15, and 37-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claims 14 and 37 are not clear, "70 degrees" with respect to what?

b. Claims 15 and 38 are not clear, "zero degrees" with respect to what?

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 10, 14, 16-22, 24, 26, 27, 32 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Koizumi et al (4,740,079).

Regarding claims 1, 2, 20-22, 24, 26, Koizumi et al discloses a method and apparatus for detecting foreign substances comprises a source (15H and 15L) for supplying a first beam at a first wavelength along a first path and second beam at a second wavelength along a second path onto a surface of the sample (1) said two paths being at different incidence angles to the sample surface; one or more detectors (20H and 20L) for detecting radiation at the first and second wavelengths, and an optical device (9) for receiving scattered light from the sample surface and originating from the first and second beams and focusing the scattered light to the detectors (figure 17, column 9, lines 6-14).

Regarding claims 3-5, see figures 18 of Koizumi.

Regarding claims 10 and 32, see column 9, lines 53-60 for visible light spectrum.

Regarding claim 14, see column 18, lines 49-50 for the angle of 2 degrees from the horizontal plane.

Regarding claims16-17, see figures 17, 21 and 22.

Regarding claims 18-19, 27, and 39, see column 9, lines 53-60 for the use of laser source.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> **(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.**

6. Claims 6-9, 11-13, 15, 23, 25, 28-31, 33-38, and 40-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koizumi et al in view of Yamaguchi et al (4,449,818) (of record).

Regarding claims 6-9, 11-13, 23, 28-31, 33-35, and 42-44, Koizumi et al teach that the wavelengths are within the visible range and does not teach that the wavelength is in the ultraviolet spectrum of radiation; however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the wavelength in the ultraviolet spectrum if small particles are detected.

Regarding claims 15, 36-38, Yamaguchi et al, from the same field of endeavor, teaches that the second light source can be arranged at zero degrees with respect to the normal. Thus, it would have been obvious to arrange the second light beam of Koizumi et al at around zero degrees as taught by Yamaguchi et al if concave shape defects are detected.

Regarding claim 25, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include in Koizumi et al a beam splitter for splitting two different light beams if a single light source is used.

Regarding claim 40, the use of crystals is well known in the art.

Regarding claim 41, it would have been obvious to use the basic device of Koizumi et al for the purpose of detecting defects on the top and within the substrate because the device would function in the same manner.

Regarding claim 45, see column18, lines 55-59 for silicon on insulator wafer.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-5, 14-15, 20-22, 24, 26, 36-38 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-51 of U.S. Patent No. 6,201,601, especially, see claims 1, 5, 7, 11, 12, 29, 30, 32, 36, 37. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claimed invention is broader than that of patent and all the limitations of the present claims 1-5, 14-15, 20-22, 24, 26 are recited in claims 1-51 of the patent.

9. Claims 1-5, 14, 15, 20, 21, 22, 24-26, and 36-38 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 85-114 of copending Application No. 09/746,141, especially see claims 85-90, 92, 101, 102, 103, 108, 114. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claimed

invention is broader than that of patent and all the limitations of the present claims 1-5, 14, 15, 20, 21, 22, 24-26, and 36-38 are recited in claims 85-114 of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10. Claims 6-13, 16-19, 23, 25, 27-35, and 39-45 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-51 of U.S. Patent No. 6,201,601.

'601 does not teach that the wavelength is in the ultraviolet spectrum of radiation; however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the wavelength in the ultraviolet spectrum if small particles are detected.

Regarding claim 25, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include in '601 a beam splitter for splitting two different light beams if a single light source is used.

Regarding claim 41, it would have been obvious to use the basic device of '601 for the purpose of detecting defects on the top and within the substrate because the device would function in the same manner.

11. Claims 6-13, 16-19, 23, 27-35, 39-45 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 85-114 of copending Application No. 09/746,141.

'141 does not teach that the wavelength is in the ultraviolet spectrum of radiation; however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the wavelength in the ultraviolet spectrum if small particles are detected.

Regarding claim 41, it would have been obvious to use the basic device of '141 for the purpose of detecting defects on the top and within the substrate because the device would function in the same manner.

This is a provisional obviousness-type double patenting rejection.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (703) 308-4808. The examiner can normally be reached on 6:30 AM to 5 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (703) 308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications. The faxing of the papers related to this application must conform with the notice published in the Official Gazette, 1096 O.G.30 (15 November 1989).

Any inquiry of a technical nature regarding reissues, petitions, and terminal disclaimers should be directed to Ed Glick whose telephone number is (703) 308-4858, Hien Phan whose telephone number is (703) 308-7502, or Ed Westin whose telephone number is (703) 308-4823.

Any inquiry of a general nature or relating to the status of this application or any patent term adjustment should be directed to TC2800 Customer Service Office whose telephone number is (703) 306-3329.

Hoa Q. Pham
Primary Examiner
Art Unit 2877

HP
January 22, 2002